Jed-i Team No.

**Inverted Pendulum Project : Stage 1 evaluation** **Total points: 25**

1. Make a sketch of your proposed design: *(5 points)*

2. List out what components and materials you will use to construct the inverted pendulum. (*2 points)*

Materials- Hack saw blade ,PVC Links , Nut bolt M4×2

Components- Arudino, Potentiometer , Moter,Moter controller

|  |  |  |
| --- | --- | --- |
| 3. | What are you using as the sensor?  Potentiometer | *(1 point)* |
| 4. | What are you using as the actuator?  Motor | *(1 point)* |
| 5. | What is the output (measured) variable?  Angle with respect to vertical | *(1 point)* |

How to Control Electromechanical Systems

|  |  |  |
| --- | --- | --- |
| Jed-i | | Team No. |
| 6. | What is the control input?  Forve applied by motor through input voltage | *(1 point)* |
| 7. | Write the mathematical model for your inverted pendulum system. | *(5 points)* |

8. How are the output and control input related? *(2 points)*

9. What system parameters will you require to be included in the code

1 Mass of the pendulum

2.pendulum Length

3.Angle turned by pendulum

*(2 points)*

10. Please bring the components, materials and semi-finished model to class and get it checked by your instructor. Final working demo on Friday, 22nd November 3:30 p.m. *(5 points)*

How to Control Electromechanical Systems